REMARKS

The present remarks are in response to the Final Office Action dated June 4, 2007, in which the Examiner issued a final rejection of claims 1-28. In this response, Applicant addresses the written description rejection, amends the claims, and responds to the present Office Action with detailed comments to overcome the rejections. No new matter has been added. The Applicant respectfully requests that the Examiner withdraw the rejections and allow the pending claims.

The Applicant has made substantive amendments to independent claims 1, 10, and 28. Additionally, the Applicant has cancelled claim 2 and made minor amendments to claims 3 – 6, 8, 11 – 12.

The Applicant respectfully responds to the Examiner's Final Rejection and requests the Examiner to place all pending claims in the application in a state of allowance.

A. Written Description Rejection (35 U.S.C. § 112)

The Examiner has rejected claims 1-28 for adding new matter into the claims and failing to comply with the written description requirement. Applicant's claim 1 was previously amended to recite, "removing the test voltage to the device audio interface port; and, supplying an audio signal to the device audio interface port after removing the test voltage." Applicant submits that even though the last two recited steps of removing the test voltage and supplying the audio signal to the device interface port were not explicitly described in the original application, it is inherent in the function of the method identifying a headset type in an electrical device which

has an interface port, as illustrated in FIG. 3, that these two steps would be necessarily disclosed and implicitly present. Therefore, Applicant submits that a person skilled in the art of audio electrical devices would not have considered these two steps to be lacking support in the original application and to constitute new matter within the meaning of first paragraph of 35 USC 112, and Applicant submits that no new matter amendments were introduced in the previously amended claims.

However to expedite the prosecution of this patent application, the Applicant has removed the claim amendments related to removing the test voltage to the device audio interface port in claim 1. Additionally, independent claims 10 and 28 have been amended to overcome the Examiner's rejection. Thus, the Applicant respectfully submits that the independent claims 1, 10, and 28 overcome the Examiner's 35 USC 112, first paragraph, claim rejection.

B. Anticipation Rejections (35 U.S.C. § 102)

The Examiner further rejected claims 1-2, 5-10, 13, 16-20, 23-24, and 26-28 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,978,689 to Tuoriniemi (hereinafter referred to as "Tuoriniemi"). Applicant submits, however, that Tuoriniemi does not teach, describe, or suggest the features of claims 1, 5-10, 13, 16-20, 23-24, and 26-28.

Claim 1 has been amended to include the limitations of recently cancelled claim 2 and includes claim elements that distinguish between identifying a stereo headset and a mono headset. More particularly, amended claim 1 now recites a method for identifying a headset plugged into a device audio interface port, the method comprising supplying a test voltage to the device audio interface port,

measuring a voltage level at the device audio interface port that includes comparing the measured voltage level to a threshold value, identifying a headset type plugged into the device audio interface port in response to measuring the voltage level and comparing the measured voltage level to the threshold value, identifying a stereo headset with a measured voltage level that exceeds the threshold value; and identifying a mono headset with the measured voltage level indicating that the mono headset is configured to be grounded.

In summary, Applicant respectfully submits that neither of the references cited by the Examiner individually or in combination includes all the elements of Applicant's amended claims. More particularly, Applicant respectfully submits that neither Tuoriniemi, nor Adams teaches distinguishing between a stereo headset and a mono headset by comparing a measured voltage level to a threshold level. Additionally, as described in further detail below, Applicant respectfully submits that the Examiner has misapplied Tuoriniemi and Adams.

For example, although Tuoriniemi does supply a test voltage to the device audio interface port, namely, the voltage V_{mic}, which provides a source of voltage; Tuoriniemi does not describe or suggest measuring a voltage level at the device audio interface port (see Tuoriniemi, col. 4, lines 35-46; col. 4, line 59 to col. 5, line 29; col. 8, lines 21-53 and col. 9, lines 1-32). In Tuoriniemi's description of its first embodiment, the voltage V_{mic} provides a source of voltage to a conductor line 55 so that when a user-manipulated switch 12 of the headset is connected to the speaker 20, the DC voltage at line 55 is equal to the voltage V_{mic}. Further, when the switch is connected to the microphone 16, the DC voltage at the line drops due to the voltage-divider action (see Tuoriniemi, col. 5, lines 1-7). Thereafter, a change in the DC

component of the voltage at line 55 is detected directly by the comparator 46 and a step change in the voltage at line 48 will be produced accordingly. The ultimate purpose of the steps above is such that when the switch is in the speaker 20, the position of the line 48 is low whereas when the switch is in the microphone 20 position, the position of the line 48 is high (see Tuoriniemi, col. 5, lines 16-28).

Moreover, Tuoriniemi is entirely silent on any steps which could be construed as describing a "measuring" step of a voltage level. At best, Tuoriniemi describes merely a "sensing" of the change of the voltage at line 55, but not a measurement of the detailed value of the voltage or the level of the voltage.

However, in Applicant's recited claims, the test voltage provides a source of voltage to a device audio interface port. Then, the method measures the value of this voltage level, identifies the type of headset (e.g., a stereo one or a mono one) in response to measuring the voltage level, which provides different audio signals according to different type of headsets. Accordingly, measuring the value of the voltage or at least measuring the voltage level is a critical step prior to identifying the type of the headset.

Again, Tuoriniemi is wholly silent on the step of measuring the voltage level at line 55 and merely senses the change which occurs at line 55, which is inefficient for purposes of identifying the type of the headset plugged into an audio device. Therefore, the limitation of Applicant's claim 1, namely, "measuring a voltage level at the device audio interface port" is neither described, suggested, nor taught in Tuoriniemi.

Additionally, Tuoriniemi specifically does not describe Applicant's step of, "identifying a headset type plugged into the device audio interface port in response

to measuring the voltage level". Instead, in Tuoriniemi, when the headset is not plugged in, Tuoriniemi's handset microphone 94 and handset speaker 92 will be switched, and when the headset is plugged in, the handset microphone 94 and handset speaker 92 will be disconnected (see Tuoriniemi, col. 8, lines 21-53). Thus, Tuoriniemi simply identifies the presence of a headset but does not identify the "headset type," for example, whether the headset is a stereo headset or a mono headset, as recited in Applicant's claim.

The Office Action further identifies certain of Tuoriniemi's passages in col. 9, lines 1-32 as disclosing the steps of Applicant's claim 1. In, fact, in these cited passages, Tuoriniemi discloses that when the headset is plugged in, the ring alert signal is heard through the speaker 18 and the microcontroller 49 switches the controllable switch 38 to forward the received telephone audio speech signal to headset speaker 18, and receives telephone audio speech signal from the microphone 16 and forwards it to the transmitter 58, and when the headset is not plugged in, the microcontroller 49 adjusts the telephone ring alert signal alert level higher to make it easily audible (see Tuoriniemi, col. 9, lines 1-32). Also, Tuoriniemi states that the, "[h]eadset 10 can alternatively be used to listen to an audio broadcast program or stored digital audio program from the audio device 68 by connecting the headset 10 connector 26 to the jack 86 in audio device housing 70" (see Tuoriniemi, col. 9, lines 17-22).

However, none of the passages above have any bearing at all on describing a method step of identifying a headset type plugged into the device audio interface port in response to measuring the voltage level. In addition, the other passages

identified in the Office Action, namely, columns 4-5 of Tuoriniemi, also fail to describe this step recited in Applicant's claim 1.

In summary, Tuoriniemi fails to teach, describe, or suggest all the limitations of claim 1 because neither of Applicant's recited steps of measuring a voltage level at the device audio interface port, identifying a headset type plugged into the device audio interface port in response to measuring the voltage level and comparing the measured voltage level to the threshold value, identifying a stereo handset with a measured voltage level that exceeds a threshold value, and identifying a mono headset with the measured voltage level indicating that the mono headset is configured to be grounded.

The Examiner also rejected independent claims 1-24 and 26-28 as being anticipated by U.S. Patent No. 6,594,366 to Adams (hereinafter referred to as "Adams"). Adams detects the presence of a plug for a cellular phone 106 or a plug for a stereo headset. However, contrary to Applicant's recited claims, Adams is not able to distinguish between a stereo headset and a mono headset by comparing a measured voltage value to a threshold value.

For example, if both channels are at low impedance, Adams considers that to be a stereo headset. However, when a mono headset is plugged in, the headset will be characterized by a one 8-ohm channel and a one 0-ohm channel, i.e., to be grounded. In this case, Adams still determines that both channels are at low impedance and accordingly considers the headset as a stereo.

In Applicant's claims, different types of headsets are distinguishable because the method recites measuring a voltage level, as well as identifies a headset type in response to measuring the voltage level because they present quite different voltage

levels in response to the test voltage. Also, Adams uses two channel detection circuits for detecting the headset, thus utilizing two identical series of electronic devices such as double comparators and doubled resistors and comparators. This is a critical and inefficient use of resources, which Applicant's claims attempt to correct.

The Examiner also rejected independent system claim 10. Concerning claim 10, for the same reasons as discussed above, Applicant respectfully disagrees. Both Tuoriniemi and Adams have voltages equal to the test voltage of the present invention. The voltages in Tuoriniemi and Adams are fixed, and cannot be changed or removed. In addition, as explained above concerning claim 1, Tuoriniemi and Adams describe identification sub-systems, but the identification system in Tuoriniemi can merely identify a headset, but not the type of the headset, and the identification system in Adams can only distinguish between a stereo headset and a cellular phone headset which has a microphone, and identifies a mono headset as a stereo headset. Therefore, although Tuoriniemi and Adams disclose their own identification systems, Applicant's identification system is patentably distinct from any of the systems disclosed in the cited references. As a result, Tuoriniemi and Adams fail to teach any of the aforementioned features as recited in Applicant's claim 10.

The Office Action also rejected pending dependent claims 3-9 and 11-27, stating that Tuoriniemi and Adams disclosed all of their limitations. All dependent claims each include, by way of their dependencies, *inter alia*, all the limitations of its independent parent claim, in this case, claim 1 and 10. Therefore, in view of all the above, the same arguments set out above with regards to claim 1 and 10 above are relevant and the rejection of these dependent claims are overcome by the same

arguments outlined for their independent claims 1 and 10 since Tuoriniemi and Adams fail to teach, describe, or suggest all the limitations of the independent claims.

The Office Action also rejected independent claim 28 on anticipation grounds over Tuoriniemi and Adams. Again, claim 28 is also patentable over Tuoriniemi and Adams because claim 28 includes *inter alia* distinguishing between a stereo headset and a mono headset by comparing a measured voltage level to a threshold level; and this limitation is not anticipated by either of the cited references. Therefore, none of these cited references, either alone or in combination, describe or suggest the limitations and features of independent claim 28.

C. Allowable Subject Matter

Applicant notes that the Examiner allowed claim 25 if rewritten in independent form to include all the limitations of the base claim and any intervening claims. At the outset, Applicant thanks the Examiner for allowing claim 25. However, since Applicant wishes to traverse the anticipation rejections based on Tuoriniemi and Adams, Applicant again respectfully submits that dependent claim 25 should be allowable as is.

D. Conclusion

In view of all of the foregoing, claims 1 and 3 - 28 overcome the prior art rejections and are now patentably distinct and in condition for allowance, which action is respectfully requested. If necessary, applicant requests, under the provisions of 37 CFR 1.136(a) to extend the period for filing a reply in the above-

identified application and to charge the fees for a large entity under 37 CRFR 1.17(a). The Director is authorized to charge any additional fee(s) or any underpayment of fee(s) or credit any overpayment(s) to Deposit Account No. 50-3001 of Kyocera Wireless Corp.

Respectfully Submitted;

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